

AI
end
a magnet located proximate the first coil and providing a second magnetic flux;

wherein the first magnetic flux is substantially opposed to the second magnetic flux thereby causing a repulsive magnetic force that moves the second end of the first coil relative to the substrate.

2. The microelectrical mechanical actuator of claim 1 wherein the first magnetic flux is substantially orthogonal to the substrate.

3. The microelectrical mechanical actuator of claim 1 wherein the first coil is substantially a conical helix when the second end of the coil is moved.

4. The microelectrical mechanical actuator of claim 1 wherein the first coil is two interleaved conical spirals.

10. The microelectrical mechanical actuator of claim 1 wherein the first coil is a semiconductor and includes a metal layer for providing a relatively lower resistance path for the selective electrical current.

Remarks

Claims 1-38 are in the application. Claims 1, 11, 17, 24, and 31 are in independent form. Claims 5-9 and 11-38 are withdrawn from consideration. Reconsideration is requested.

Claims 1-4 and 10 stand rejected under 35 USC 122, second paragraph, for indefiniteness. The Examiner states that:

In claim 1, lines 8-9, the language "the second end is in communication with the second conductor" would appear to be misdescriptive, incomplete and/or fails to particular point out and distinctly claim the subject matter which applicant regards as the invention. As understood by the examiner, it would appear that the first end of the coil (218) is fixedly coupled to a substrate (206) as well as being in communication with a first conductor (224). However, it would appear that the second end of the coil would be would connected to the mirror (200) and not with a second conductor. Note Figure 19.

Applicants respond as follows.

Claim 1 has been amended to omit paragraph references and to clarify the antecedent basis for the second end of the first conductive coil. With regard to the rejection, applicants note that claim 1 recites that "the second end is in communication with the second conductor so that electrical current can be selectively conducted through the first coil." The Examiner states that "it would appear that the second end of the coil would be would connected to the mirror (200) and not with a second conductor." However, applicants note that the application describes one implementation in which "the second end is in communication with the second conductor" via a bridge 210 and another coil:

With reference to Fig. 18, a steady-state electrical potential source 258 applied across the probe pads 224a and 224b creates an electrical current that is conducted from the steady-state source to the center 218a of one coil 208a (when the potential at 218a is greater than 218b). The current path proceeds clockwise along the spirals of coil 208a to the outermost portion 220 of coil 208a. From coil 208a, the current is conducted by the bridge 210 to the outermost portion of coil 208b whence the current is conducted clockwise along the spirals 216 of coil 208b to the innermost portion 214 of the coil 208b and to the probe pad 218b. Thus, as viewed in plan in Fig. 18, the current proceeds clockwise through each coil. (Application page 12, lines 5-14.)

Applicants submit therefore that claim 1 is definite and particularly points out and distinctly claims the subject matter that applicants regard as the invention

Applicants believe the application is in condition for allowance and respectfully request the same.

IPSOLON LLP
805 SW BROADWAY #2740
PORTLAND, OREGON 97205
TEL. (503) 249-7066
FAX (503) 249-7068

Respectfully Submitted,



Mark M. Meininger
Registration No. 32,428